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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,715	09/29/2006	Sureshchandra B. Patel		2121

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Sureshchandra B Patel
37 Miller Street
Toronto Ontario, M6N2Z6
CANADA

EXAMINER

TAYLOR, VICTOR J

ART UNIT	PAPER NUMBER
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2863

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,715	Applicant(s) PATEL, SURESHCHANDRA B.	
	Examiner VICTOR J. TAYLOR	Art Unit 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims

1. Claims 1-5 are pending in the instant application. Therefore, claims 1-5 are presented for examination.

Specification

2. The abstract of the disclosure is objected to because the abstract is not in a single paragraph form and contains highlighted text and also contains sub-parts 1), and 2), and 3). The abstract is also lengthy at 279 words. The abstract is limited to a single paragraph and should contain 50 to 150 words. Correction is required. See MPEP § 608.01(b).
3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Drawings

4. The drawings were received on 9/29/2006. These drawings are approved.

Claim Objections

5. Claims 4 and 5 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

(a). Claim 4 recites a load flow computation as defined in claim 1 as used in solving sub-networks defined in claim 3 and combined with steps for estimating and initializing a vector and counting steps and calculating and estimating using an equation that has multiple dependency to claim 1 and claim 3 and it is in improper dependent form and it is not clear as what the correct antecedent basis is for claim 1 or to claim 3.

(b). Claim 5 has an improper claim dependency to claims 1-4 and it is not clear as to just which step is further limited by the communications only with the server.

6. Claim 4 is objected to because of the following informalities:

Line 7 in claim 4 is missing the proper wording for “the following equation with the number (3)” wherein the word (equation) is missing from this line. Appropriate correction is required.

7. Claim 5 is objected to because of the following informalities:

Claim 5 is in improper multi-dependent form and the claim is not in proper antecedent form and line 4 in claim 5 contains the reference to (Fig.4). Appropriate correction is required.

8. Claims 4 and 5 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claims fail to clearly show the antecedent basis and

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further limit the independent claims. See MPEP § 608.01(n). Accordingly, the claims 4 and 5 not been further treated on the merits.

Prior Art

9. The prior art made of record and not relied upon is considered pertinent to applicant;

I. Art A of Egelston et al., US 3,886,330 A in class 703/3 is cited for the monitoring system for electrical on line load flow computer arrangement, see abstract and computer arrangement (60) in figure 1.

II. Art B of Hanway et al., US 5,081,591 A in class 323/205 is cited for the computer system for optimizing load power distribution in the industrial power network, see abstract and the network matrix (56) in figure 1.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-2 are rejected under 35 U.S.C. 102 (b) as being anticipated by Nelson et al., in US Patent 6,243,244 B1 in class 361/64.

With regard to claim 1, wherein the cited limitations are interpreted in the broadest interpretation to include the “systems to process load flow computation by means of parallel algorithm using invented available parallel computer” (208) in figure 2.

Nelson et al., further discloses all the limitations for claim 1, wherein the limitations define,

(a) The steps for “obtaining on-line data of open/close status of switches and circuit breakers in the power network” (102) in figure 1 and in lines 20-25 of column 4.

And further discloses,

(b). The steps for “obtaining on-line readings of real and reactive power assignments or settings at PQ- nodes, real power and voltage magnitude assignments or settings at PV-nodes and transformer turns ratios, which are the controlled variables/parameters” in the communications channel (110) in figure 1. And further discloses,

(c). The steps for “performing load-flow computation to calculate complex voltages or voltage magnitude corrections and voltage angle corrections at the power network nodes providing for the calculation of power flowing through different network components, and reactive power generation and transformer tap-position indications” using the Node (108G) with the communication channel (110) in figure 1 and in lines 55-60 of column 2. And further discloses,

(d). The steps for “evaluating the computed load flow for any of the over loaded power network components and for under/over voltage at any of the nodes” using the computer device (318) in figure 3.

(e). The steps for “correcting one or more controlled parameters and repeating the computing and evaluating steps until evaluating step finds a good power system without any over loaded components and without any under/over voltages in the power

network” using the nodes and computer (110) in figure 2 and the controlling system in lines 10-20 of column 4. And further discloses,

(f). The steps for “effecting a change in the power flowing through network components and voltages and phases at the nodes of the power network by actually implementing the finally obtained values of controlled parameters after evaluating step finds a good power system” using the computer system (206) in figure 2 and the node distribution channel in lines 35-40 of column 4 in combination with the complete document.

As to claim 2, Nelson further discloses the limitation for “self iteration over a node voltage calculation (108G) within a network-wide global iteration (110) as depicted by the following equation for subtraction and addition in nodes location according to a stored program using the node controller (204) in lines 40-65 of column 4. He does not teach the particular equation as cited for use with the iteration equation in claim 2.

Allowable Subject Matter

12. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Wherein the use of a method of decomposing a network referred to as Suresh's diakoptics involves determining a sub-network for each node involving directly connected nodes referred to as level-1 nodes and their directly connected nodes referred to as level-2 node with the level of outward connectivity for local solution of a sub-network around a given node is determined experimentally.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VICTOR J. TAYLOR whose telephone number is (571)272-2281. The examiner can normally be reached on 8:00 to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571-272-2863. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)? If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VT/
2/14/2008

/John E Barlow Jr./
Supervisory Patent Examiner, Art
Unit 2863